

What is claimed is:


1. A refueling receiver comprising:  
an inlet configured to receive a nozzle;  
a control valve piston connected to said inlet to allow flow from said inlet to said control valve piston, said control valve piston having an inlet side and an outlet side;  
an outlet comprising an outlet fitting and a return fitting, said outlet fitting connected to said inlet to allow flow from said inlet to said outlet fitting, and said return fitting connected to said outlet fitting to allow flow from said outlet fitting to said return fitting; and  
a pilot valve in communication with said return fitting to control a pressure differential between said inlet side and said outlet side to move said control valve piston into a first position to allow flow out of the receiver, and a second position to prevent flow from leaving the receiver.
2. The refueling receiver as recited in claim 1 wherein said return fitting is connected to said outlet fitting through a sensor.
3. The refueling receiver as recited in claim 1 wherein said return fitting is connected to said outlet fitting through a jet sensor.
4. The refueling receiver as recited in claim 1 further comprising a

sensor connected between said outlet fitting and said return fitting, said sensor comprising:

- an input connected to said outlet fitting; and
- an output connected to said return fitting.

5. The refueling receiver as recited in claim 1 further comprising a connecting rod forming a main body bore connecting said inlet to said outlet fitting.

6. The refueling receiver as recited in claim 1 wherein said pilot valve is in communication with said outlet side so that flow from the return fitting moves said pilot valve releasing pressure from said outlet side.

7. A method for filling a tank comprising the steps of:   
receiving fuel at an inlet of a receiver;  
allowing fuel to flow through the receiver to a control valve piston having an inlet side and an outlet side;  
allowing fuel to flow from the inlet side to the outlet side;  
allowing fuel to flow from the inlet to an outlet fitting and back into the receiver through a return fitting; and  
controlling a pressure differential between the inlet side and the outlet side using the fuel flow from the return fitting.

8. The method as recited in claim 7 further comprising the step of allowing fuel to flow from the outlet fitting through a sensor and back to the return fitting.

9. The method as recited in claim 7 further comprising the step of allowing fuel to flow from the outlet fitting through a jet sensor and back to the return fitting.

10. The method as recited in claim 7 further comprising the step of allowing fuel to flow from the outlet fitting to an input of a sensor, through an output of the sensor, and back to the return fitting.

11. The method as recited in claim 7 wherein fuel flows from the inlet to the outlet fitting through a connecting rod forming a main body bore connecting the inlet to the outlet fitting.

12. The method as recited in claim 7 further comprising the step of moving a pilot valve in communication with the outlet side so that flow from the return fitting moves the pilot valve releasing pressure from the outlet side.

13. A system for filling a tank comprising:

means for receiving fuel at an inlet of a receiver;

means for allowing fuel to flow through the receiver to a control valve piston having an inlet side and an outlet side;

means for allowing fuel to flow from the inlet side to the outlet side;

means for allowing fuel to flow from the inlet to an outlet fitting and back into the receiver through a return fitting; and

means for controlling a pressure differential between the inlet side and the outlet side using the fuel flow from the return fitting.

14. The system as recited in claim 13 further comprising means for of allowing fuel to flow from the outlet fitting through a sensor and back to the return fitting.

15. The system as recited in claim 13 further comprising means for allowing fuel to flow from the outlet fitting through a jet sensor and back to the return fitting.

16. The system as recited in claim 13 further comprising means for allowing fuel to flow from the outlet fitting to an input of a sensor, through an output of the sensor, and back to the return fitting.

17. The system as recited in claim 13 wherein fuel flows from the

inlet to the outlet fitting through a connecting rod forming a main body bore connecting the inlet to the outlet fitting.

18. The system as recited in claim 13 further comprising means for moving a pilot valve in communication with the outlet side so that flow from the return fitting moves the pilot valve releasing pressure from said outlet side.

19. A refueling receiver comprising: ✓

an inlet configured to receive a nozzle;

a control valve piston connected to said inlet to allow flow from said inlet to said control valve piston, said control valve piston having an inlet side and an outlet side;

an outlet comprising an outlet fitting and a return fitting, said outlet fitting connected to said inlet to allow flow from said inlet to said outlet fitting;

a sensor having an input connected to said outlet fitting, and an output connected to said return fitting to allow flow from said outlet fitting to said return fitting through said sensor; and

a pilot valve in communication with said return fitting to control a pressure differential between said inlet side and said outlet side to move said control valve piston into a first position to allow flow out of the receiver, and a second position to prevent flow from leaving the receiver.

Docket No. 20756.2640  
Customer No. 30734

PATENT

20. The refueling receiver as recited in claim 19 further comprising a connecting rod forming a main body bore connecting said inlet to said outlet fitting.